IN THE CLAIMS

Please amend the claims as follows:

1. (Original) A method for sampling packets in a network, comprising:

determining a first number of packets to be sampled from a second number of packets;

pseudo-randomly shuffling a packet index order corresponding to said second number of packets;

sampling a packet based on a pseudo-randomly shuffled packet index.

2. (Cancelled)

3. (Currently Amended) The method of Claim [[2]] 1, wherein said pseudo-randomly shuffling is performed by a linear feedback shift register and said second number of packets is a power of two.

4. (Currently Amended) The method of Claim [[2]] 1, wherein said pseudo-randomly shuffling is performed by a linear feedback shift register and said second number of packets is any positive integer number.

5. (Currently Amended) ~~The method of claim 4 further~~ A method for sampling packets in a network, comprising:

determining a first number of packets n to be sampled from a second number of packets N using a linear feedback shift register, wherein said second number of packets is any positive integer;

partitioning said second number of packets N into a plurality of Y groups, each group being comprised of a single number or two numbers, said plurality of Y groups being equal to a largest power of two which is smaller than or equal to said second number of packets N; and

~~selecting a number from said plurality of groups for determining sampling.~~

comparing said first number of packets n to said plurality of Y groups, wherein if said first number of packets n is less than or equal to said plurality of Y groups, selecting a sampling

point from each group to be one of (a) said single number and (b) a number randomly selected from said two numbers.

6. (Currently Amended) The method of Claim 5, wherein if said first number of packets n is greater than said plurality of Y groups, selecting all numbers from each group to be sampling points except one of (a) said single number and (b) said number randomly selected from said two numbers. ~~further comprising using a linear feedback shift register to determine which of said plurality of groups contains at least two numbers.~~

7. (Currently Amended) The method of Claim 5 ~~2 further comprising using a counter or a pseudo-random number generator.~~ further comprising determining which of said plurality of Y groups contains said two numbers, wherein determining comprises:

taking a difference between said second number of packets N and said plurality of Y groups to determine a total of groups containing said two numbers;

randomly selecting a number X between zero and Y-1;

comparing said randomly selected number X, said second number of packets N, and said plurality of Y groups to determine which of said plurality of Y groups contains said two numbers; and

selecting said sampling point responsive to said comparing.

8-9. (Cancelled)

10. (Currently Amended) An apparatus for sampling packets comprising:

~~logic for selecting n-out-of-N packet for sampling, wherein a packet index is pseudo-randomly shuffled.~~

a first packet index sequence comprising a plurality of N packets ordered sequentially;

a randomly shuffled packet index sequence comprising said plurality of N packets, wherein said randomly shuffled packet index sequence comprises each of said N packets of said first packet index sequence in a randomly shuffled order, and wherein each packet index of said randomly shuffled packet index sequence corresponds to a different packet index of said first packet index sequence; and

a circuit structured to randomly select a number S which is less than or equal to N and to sample a plurality of n packets from said plurality of N packets responsive to said randomly selected number S.

11. (Currently Amended) The apparatus of Claim 10, wherein ~~said logic performs a shuffle function with a one-to-one mapping and no overlap.~~ if S is less than or equal to one packet index of said randomly shuffled packet index sequence, and said one packet index is less than or equal to (S + n – 1), said circuit is structured to sample a packet corresponding to said one packet index.

12. (Currently Amended) The apparatus of Claim [[10]] 11, wherein ~~logic comprises a linear feedback shift register.~~ said circuit is structured to detect a wrap condition if said one packet index is less than or equal to (S + n – 1 – N).

13. (Currently Amended) The apparatus of Claim [[10]] 12, wherein ~~said linear feedback shift register performs a shuffle function when N is a power of two.~~ said circuit is structured to sample said packet corresponding to said one packet index responsive to detecting said wrap condition.

14. (Currently Amended) The apparatus of Claim 10, wherein ~~said linear feedback shift register performs a shuffle function when N is any positive integer value.~~ said randomly shuffled packet index sequence is used for successive sets of N packets.

15. (Currently Amended) The apparatus of Claim 10, wherein said randomly shuffled packet index sequence is reshuffled for every N packets.

~~further comprising:~~

~~a circuit coupled to said logic for partitioning N into Y groups equal to a largest power of two which is smaller than or equal to N;~~

~~a selector for selecting or (N – n) groups.~~

16-22. (Cancelled)

23. (New) The apparatus of Claim 10, wherein said randomly shuffled packet index sequence is shuffled using a linear feedback shift register, and wherein N is a power of two.

24. (New) The apparatus of Claim 1, wherein said method for sampling packets is implemented in either hardware or software.

25. (New) An article of computer readable media storing computer executable instructions which cause the computer to:

determine a first number of packets to be sampled from a second number of packets;

pseudo-randomly shuffle a packet index order corresponding to said second number of packets;

sample a packet based on a pseudo-randomly shuffled packet index.

26. (New) The article of computer readable media of Claim 25, wherein said pseudo-randomly shuffle is performed by a linear feedback shift register and said second number of packets is a power of two.

27. (New) The article of computer readable media of Claim 25, wherein said pseudo-randomly shuffle is performed by a linear feedback shift register and said second number of packets is any positive integer number.

28. (New) An article of computer readable media storing computer executable instructions which cause the computer to:

determine a first number of packets n to be sampled from a second number of packets N using a linear feedback shift register, wherein said second number of packets is any positive integer;

partition said second number of packets N into a plurality of Y groups, each group being comprised of a single number or two numbers, said plurality of Y groups being equal to a largest power of two which is smaller than or equal to said second number of packets N; and

compare said first number of packets n to said plurality of Y groups, wherein if said first number of packets n is less than or equal to said plurality of Y groups, causing the computer to select a sampling point from each group to be one of (a) said single number and (b) a number randomly selected from said two numbers.

29. (New) The article of computer readable media of Claim 28, wherein if said first number of packets n is greater than said plurality of Y groups, causing the computer to select all numbers from each group to be sampling points except one of (a) said single number and (b) said number randomly selected from said two numbers.

30. (New) The article of computer readable media of Claim 28 further causing the computer to determine which of said plurality of Y groups contains said two numbers, wherein causing the computer to determine includes causing the computer to:

take a difference between said second number of packets N and said plurality of Y groups to determine a total of groups containing said two numbers;

randomly select a number X between zero and Y-1;

compare said randomly selected number X, said second number of packets N, and said plurality of Y groups to determine which of said plurality of Y groups contains said two numbers; and

select said sampling point responsive to said comparing.